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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,626	07/30/2003	Kimiyuki Hayasaki	00862.023160	9131
5514	7590	02/06/2006	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			VO, ANH T N	
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NEW YORK, NY 10112			PAPER NUMBER	
			2861	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,626

Applicant(s)

HAYASAKI, KIMIYUKI

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 16-19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 16-19 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/08/2005</u> | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL REJECTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/08/2005 has been entered.

Claim Rejections

Claim Rejections - 35 USC § 112

Claims 2-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 2, the recitation "command" on line 3 and "specific information" on line 6 is confusing because it is unclear if these are additional "command" and "specific information" or further recitation of the previously "command" on line 4 of claim 1 and "specific information" on line 3 of claim 2.

The remaining claims are dependent from the above rejected claims and therefore considered indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 and 17-19 are rejected under 35 USC 102 (e) as being anticipated by Tsuji (US 6,494,559).

Tsuji discloses in Figures 1-2, 6, 8, 16-17, 18A and 18B a printing system comprising:

- a command generation means (2) for outputting a command for setting data for causing the printheads (140, 150 in Figures 18A-18B) to perform predetermined processing;
- a carriage or a head mounting means (103, Figure 17) which supports the printheads for scanning the printheads on the target printing medium (P, Figure 16);
- a control means (3 in Figure 1), arranged on a circuit substrate (130, Figure 17) of the said carriage (103), for receiving the command generated by said command generation means (2) and outputting a control signal corresponding to the command to the printheads, thereby controlling the printheads;
- wherein the printheads comprises storage means (4, 5, Figures 1-2) for storing feature information, said command generation means (2) outputs a command for acquiring specific information from information held by the printheads, and said control means (3) receives the command generated by said command generation means (2), accesses the storage means (4,5) of the printheads, and acquires specific information corresponding to the command from the storage means (4,5);
- wherein said control means (3) comprises conversion means (3b, Figure 1 or 19 in Figure 6) for converting the command (RXD, TXD, SEL) generated by said command generation means (2) into an access signal containing an address for reading out information specified by the command from the storage means (4,5), and acquisition means (3C) for accessing the storage means (4,5) in response to the access signal obtained by the conversion

means (3b), and acquiring the specific information;

- wherein the conversion means (3b, 19) has, in correspondence with each of a plurality of types of printheads, a table (21) which makes the information specified by the command and a storage address correspond to each other, and generates the access signal by looking up a table corresponding to a mounted printheads; and
- with regard to claim 17, the first claimed control unit is read on the command generation means (2) and the second claimed control unit is read on the control means (3) of Tsuji.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 16-19 and 21 are rejected under 35 USC 103 (a) as being unpatentable over Barbour et al (US 6,318,828) in view of Tsuji (US 6,494,559).

Barbour et al discloses in Figures 1A, 1b and 2-29 a printing system comprising:

- a command generation means (110) for outputting a command for setting data for causing the printhead (116) to perform predetermined processing responsive to a reception means (106);
- a carriage (234) which supports the printheads (116, 236) for scanning the printhead on the target printing medium (Figure 2);
- a control means (124), arranged on the said carriage (234), for receiving the command generated by said command generation means (110) and outputting a control signal corresponding to the command to the printhead (116), thereby controlling the printhead (116);
- wherein the printhead (116) comprises storage means (122) for storing feature information, said command generation means (110) outputs a command for acquiring specific information

from information held by the printhead (116), and said control means (114) receives the command generated by said command generation means (110), accesses the storage means (122) of the printhead, and acquires specific information corresponding to the command from the storage means (122);

- wherein said control means (124) comprises conversion means (2120, Figures 17 and 21) for converting the command (CS DATA) generated by said command generation means (110) into an access signal containing an address for reading out information specified by the command from the storage means (ROM), and acquisition means (2215) for accessing the storage means (ROM) in response to the access signal obtained by the conversion means (2120), and acquiring the specific information;

- wherein the conversion means (2120) has, in correspondence with each of a plurality of types of printheads, a table (not shown) which makes the information specified by the command and a storage address correspond to each other, and generates the access signal by looking up a table corresponding to a mounted printhead;

- wherein the command generated by said command generation means (110) includes a command for driving and controlling the printhead (116);

- wherein the printing element has a heating element (not shown), and performs printing by discharging ink from an orifice arranged in correspondence with the heating element;

- wherein said generation means generates a second command on the basis of a result of executing processing by said control means in accordance with a generated first command, and outputs the second command to said control means (Figures 5-6); and

- wherein a heating element (resistor) is used as the printing element, and printing is performed by discharging ink from an orifice arranged in correspondence with the heating element.

However, Barbour does not disclose that the control means (124) is mounted on the carriage.

Nevertheless, Tsuji suggests in Figures 1 and 16-17 a printing system comprising controlling portion (3) mounted on a substrate (130) of the carriage (103) for reducing a number of connection lines between the carriage and the printer main body, see the Abstract.

It would have been obvious to a person having skill in the art at the time the invention was made to place the control means (124) of Barbour on the circuit substrate of the carriage as suggested by Tsuji for the purpose of reducing the number of connection lines between the carriage and the printer main body.

With regard to claim 17, the first claimed control unit is read on the command generation means (110) and the second claimed control unit is read on the control means (124) of Barbour et al.

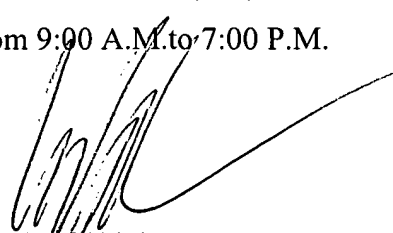
Response to Applicant's Arguments

The applicant argues that Barbour et al does not suggest a control means arranged on a carriage or on a head mounting means because the processor (124) of Barbour et al is arranged within the printhead assembly (116) The argument is persuasive. However, this limitation is suggested in the Tsuji reference as stated above.

The applicant argues that Barbour does not suggest the second control unit. The argument is not persuasive because the second control unit as claimed is read on the control means (124) of Barbour et al.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo. whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M. The fax number of this Group 2861 is (571) 273-8300.


ANH T.N. VO
PRIMARY EXAMINER
January 27, 2006